

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SGE4--SQLEDOS-20L35KE1--OSMWSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST]20141022_M-20L-Gen3
[TESTLAB]OSRAM SYLVANIA
[TESTDATE]8/13/2014
[ISSUEDATE]8/13/2014
[UPDATE]11/11/2016
[MANUFAC]Spectrum Lighting
[LUMCAT]SGE4SQLEDOS-20L-35K-E1-CA0244OS-MW-SO
[LUMINAIRE]4" Square, LED recessed downlight
[TRIM]Cast Alum, Matte White finish, regressed Solite lens
[OTHER]59.6 Degree Beam Angle
[LAMP]N/A
[LAMPCAT]N/A
[OTHER]Total Luminaire Watts is approximate
[OTHER]Photometric measurements taken at 120VAC
[OTHER]Data applicable for Housing: SGE4PZSQLEDOS
[OTHER]Data applicable for Trims: SD4NOS-MS-SO and TP0244OS-MW-SO
[OTHER]Output Multipliers: 40K x 1.0, 30K x 1.0, 27K x 0.946
[OTHER]Catalog number designation update: 25W is now called 20L
[OTHER]This report updated by Spectrum Lighting, scaled from Gen2 30L

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1705
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	20.24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.96
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	0.98
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.31 ft
Luminous Width (90-270)	0.31 ft
Luminous Height	0.00 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	38798	40951	38488
55	32944	30919	32890
65	26528	25741	26350
75	21756	21612	21706
85	17961	18463	18082

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085
2.5	1282.027	1282.852	1282.215	1281.108	1278.199	1281.108	1282.215	1282.852	1282.027	1282.852
5.0	1273.618	1273.046	1273.350	1274.327	1271.317	1274.327	1273.350	1273.046	1273.618	1273.046
7.5	1266.873	1265.201	1263.949	1264.217	1264.188	1264.217	1263.949	1265.201	1266.873	1265.201
10.0	1255.938	1253.137	1250.459	1252.717	1254.454	1252.717	1250.459	1253.137	1255.938	1253.137
12.5	1239.995	1240.089	1238.627	1238.453	1240.284	1238.453	1238.627	1240.089	1239.995	1240.089
15.0	1214.926	1219.478	1225.325	1218.581	1212.842	1218.581	1225.325	1219.478	1214.926	1219.478
17.5	1166.148	1184.176	1205.583	1177.004	1162.950	1177.004	1205.583	1184.176	1166.148	1184.176
20.0	1092.990	1129.754	1173.168	1114.172	1087.953	1114.172	1173.168	1129.754	1092.990	1129.754
22.5	991.997	1050.067	1114.020	1031.178	986.128	1031.178	1114.020	1050.067	991.997	1050.067
25.0	873.947	948.886	1027.393	926.307	868.447	926.307	1027.393	948.886	873.947	948.886
27.5	747.589	831.083	916.414	805.507	741.105	805.507	916.414	831.083	747.589	831.083
30.0	620.457	708.510	788.117	684.085	615.579	684.085	788.117	708.510	620.457	708.510
32.5	507.212	588.303	663.553	567.316	505.418	567.316	663.553	588.303	507.212	588.303
35.0	418.689	481.991	545.872	465.672	416.395	465.672	545.872	481.991	418.689	481.991
37.5	351.668	398.636	445.177	386.007	349.106	386.007	445.177	398.636	351.668	398.636
40.0	302.159	334.718	364.694	325.549	299.655	325.549	364.694	334.718	302.159	334.718
42.5	269.101	287.070	303.505	281.179	266.379	281.179	303.505	287.070	269.101	287.070
45.0	245.161	251.934	258.766	249.886	243.207	249.886	258.766	251.934	245.161	251.934
47.5	225.592	225.968	225.715	226.612	224.579	226.612	225.715	225.968	225.592	225.968
50.0	207.463	204.206	199.220	206.349	207.014	206.349	199.220	204.206	207.463	204.206
52.5	188.596	183.834	177.133	186.367	188.133	186.367	177.133	183.834	188.596	183.834
55.0	168.861	164.808	158.483	166.929	168.586	166.929	158.483	164.808	168.861	164.808
57.5	149.263	146.578	141.548	147.548	148.894	147.548	141.548	146.578	149.263	146.578
60.0	131.091	129.484	125.627	129.354	130.288	129.354	125.627	129.484	131.091	129.484
62.5	114.576	113.701	110.900	112.803	113.606	112.803	110.900	113.701	114.576	113.701
65.0	100.189	99.053	97.215	98.083	99.516	98.083	97.215	99.053	100.189	99.053
67.5	86.243	85.512	84.297	85.426	85.853	85.426	84.297	85.512	86.243	85.512
70.0	73.651	72.797	72.189	72.949	73.253	72.949	72.189	72.797	73.651	72.797
72.5	61.717	61.095	60.755	61.189	61.319	61.189	60.755	61.095	61.717	61.095
75.0	50.319	50.000	49.986	50.109	50.203	50.109	49.986	50.000	50.319	50.000
77.5	39.955	39.861	40.035	40.013	39.927	40.013	40.035	39.861	39.955	39.861
80.0	30.641	30.489	30.613	30.721	30.518	30.721	30.613	30.489	30.641	30.489
82.5	21.950	21.950	22.124	22.145	21.863	22.145	22.124	21.950	21.950	21.950
85.0	13.989	14.033	14.380	14.373	14.083	14.373	14.380	14.033	13.989	14.033
87.5	6.861	6.868	7.288	7.302	7.157	7.302	7.288	6.868	6.861	6.868
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085	1282.085
2.5	1282.215	1281.108	1278.199	1281.108	1282.215	1282.852	1282.027
5.0	1273.350	1274.327	1271.317	1274.327	1273.350	1273.046	1273.618
7.5	1263.949	1264.217	1264.188	1264.217	1263.949	1265.201	1266.873
10.0	1250.459	1252.717	1254.454	1252.717	1250.459	1253.137	1255.938
12.5	1238.627	1238.453	1240.284	1238.453	1238.627	1240.089	1239.995
15.0	1225.325	1218.581	1212.842	1218.581	1225.325	1219.478	1214.926
17.5	1205.583	1177.004	1162.950	1177.004	1205.583	1184.176	1166.148
20.0	1173.168	1114.172	1087.953	1114.172	1173.168	1129.754	1092.990
22.5	1114.020	1031.178	986.128	1031.178	1114.020	1050.067	991.997
25.0	1027.393	926.307	868.447	926.307	1027.393	948.886	873.947
27.5	916.414	805.507	741.105	805.507	916.414	831.083	747.589
30.0	788.117	684.085	615.579	684.085	788.117	708.510	620.457
32.5	663.553	567.316	505.418	567.316	663.553	588.303	507.212
35.0	545.872	465.672	416.395	465.672	545.872	481.991	418.689
37.5	445.177	386.007	349.106	386.007	445.177	398.636	351.668
40.0	364.694	325.549	299.655	325.549	364.694	334.718	302.159
42.5	303.505	281.179	266.379	281.179	303.505	287.070	269.101
45.0	258.766	249.886	243.207	249.886	258.766	251.934	245.161
47.5	225.715	226.612	224.579	226.612	225.715	225.968	225.592
50.0	199.220	206.349	207.014	206.349	199.220	204.206	207.463
52.5	177.133	186.367	188.133	186.367	177.133	183.834	188.596
55.0	158.483	166.929	168.586	166.929	158.483	164.808	168.861
57.5	141.548	147.548	148.894	147.548	141.548	146.578	149.263
60.0	125.627	129.354	130.288	129.354	125.627	129.484	131.091
62.5	110.900	112.803	113.606	112.803	110.900	113.701	114.576
65.0	97.215	98.083	99.516	98.083	97.215	99.053	100.189
67.5	84.297	85.426	85.853	85.426	84.297	85.512	86.243
70.0	72.189	72.949	73.253	72.949	72.189	72.797	73.651
72.5	60.755	61.189	61.319	61.189	60.755	61.095	61.717
75.0	49.986	50.109	50.203	50.109	49.986	50.000	50.319
77.5	40.035	40.013	39.927	40.013	40.035	39.861	39.955
80.0	30.613	30.721	30.518	30.721	30.613	30.489	30.641

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CANDELA TABULATION - (Cont.)

82.5	22.124	22.145	21.863	22.145	22.124	21.950	21.950
85.0	14.380	14.373	14.083	14.373	14.380	14.033	13.989
87.5	7.288	7.302	7.157	7.302	7.288	6.868	6.861
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	461.58	N.A.	27.10
0-30	887.00	N.A.	52.00
0-40	1191.82	N.A.	69.90
0-60	1537.57	N.A.	90.20
0-80	1689.38	N.A.	99.10
0-90	1705.34	N.A.	100.00
10-90	1584.41	N.A.	92.90
20-40	730.24	N.A.	42.80
20-50	928.31	N.A.	54.40
40-70	444.06	N.A.	26.00
60-80	151.81	N.A.	8.90
70-80	53.50	N.A.	3.10
80-90	15.96	N.A.	0.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1705.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	120.94
10-20	340.64
20-30	425.42
30-40	304.82
40-50	198.07
50-60	147.69
60-70	98.31
70-80	53.50
80-90	15.96
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

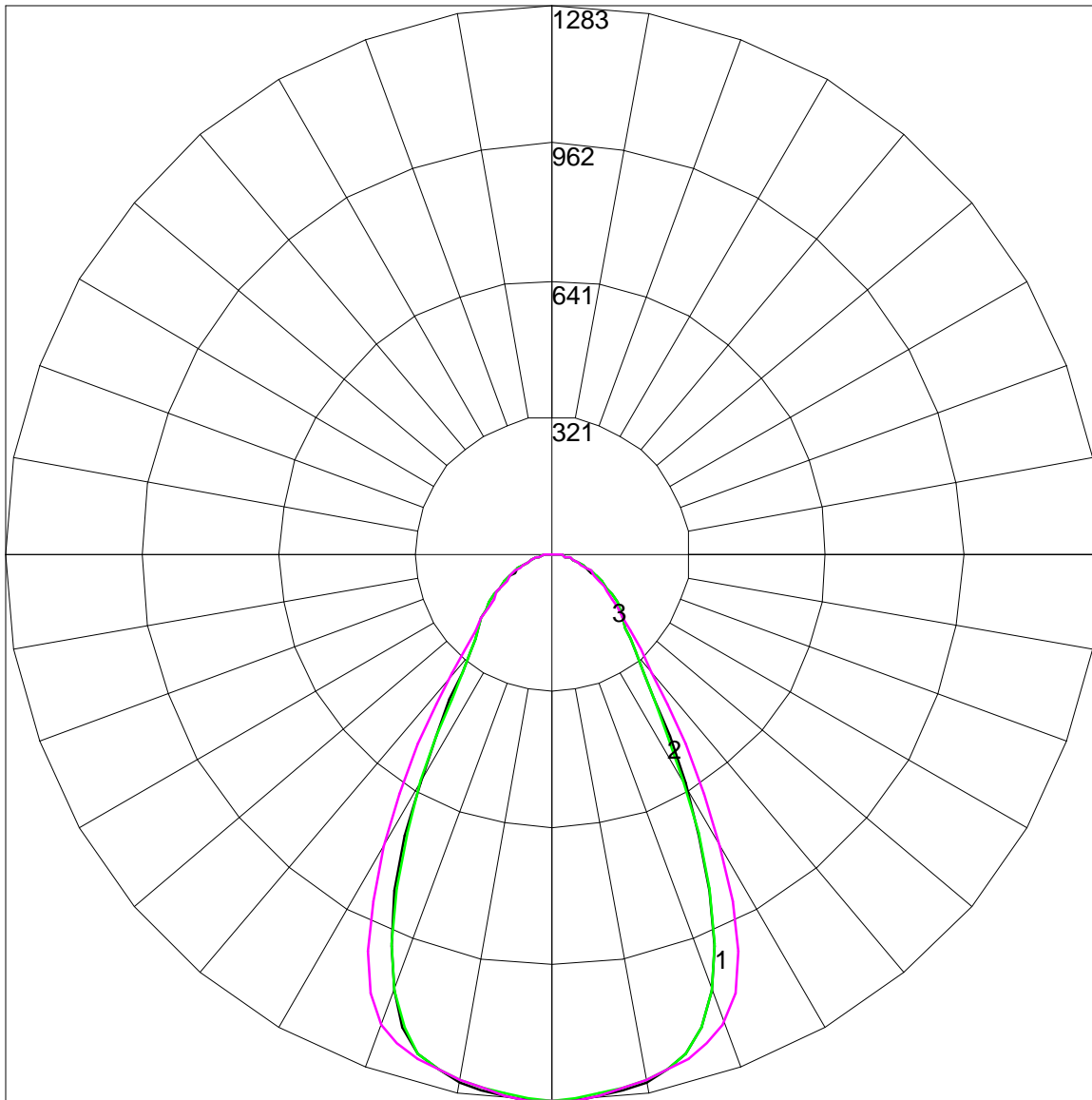
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89
2	104	97	92	87	101	96	91	86	92	88	85	89	86	83	86	83	81	79
3	97	88	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	53
7	75	64	56	51	73	63	56	51	62	55	51	60	55	50	59	54	50	49
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45
9	67	55	48	44	66	55	48	44	54	48	43	53	47	43	52	47	43	42
10	63	52	45	41	62	51	45	41	51	45	40	50	44	40	49	44	40	39

POLAR GRAPH



Maximum Candela = 1282.852 Located At Horizontal Angle = 22.5, Vertical Angle = 2.5

- # 1 - Vertical Plane Through Horizontal Angles (0 - 180)
- # 2 - Vertical Plane Through Horizontal Angles (90 - 270)
- # 3 - Vertical Plane Through Horizontal Angles (45 - 225)